

REMARKS

Review from Group Director Respectfully Requested

In early July, Applicant's representatives contacted the Group Director of Art Unit 1700 in an attempt to expedite prosecution of this application. Thus, **Applicant again requests that the Group Director of Art Unit 1700 (Jacqueline Stone) review the lengthy history of the present application, including the current lengthy Office Action and this present Reply, and to monitor the progress of this application.** The lengthy history of this case is as follows:

- First Office Action issued on 07-05-01;
- Reply by Applicants filed on 11-05-01;
- Second (and Final) Office Action issued on 01-18-02, wherein previous arguments by Applicants rendered moot in view of new grounds of rejection;
- Response by Applicants filed on 09-09-02 (no claim amendments);
- Advisory Action issued on 09-16-02;
- Preliminary reply filed by Applicants on 10-03-02;
- Third Office Action issued on 12-10-02, wherein previous arguments by Applicants rendered moot in view of new grounds of rejection;
- Interview conducted on 03-06-03;
- Reply by Applicants filed on 04-07-02;
- Fourth Office Action issued on 06-18-03;
- Reply by Applicants (with claim amendments) filed on 09-22-03;
- Fifth (and Final) Office Action issued on 12-03-03;

- Reply (after Final) filed by Applicants on 03-03-04;
- Advisory Action issued on 04-08-04;
- Applicants file Appeal Brief (with Notice of Appeal beforehand) on 07-06-04;
- Examiner's Notice that Appeal Brief is defective issued on 09-17-04;
- Interview with Supervisory Patent Examiner Warden, wherein Notice is withdrawn and Appeal Brief accepted on 09-27-04;
- Sixth Office Action issued, wherein prosecution is reopened and previous arguments by Applicants rendered moot in view of new grounds of rejection on 11-04-04;
- Applicants file Reinstatement of Appeal and Supplemental Appeal Brief on 03-03-05;
- Seventh Office Action issued, wherein prosecution is reopened and previous arguments by Applicants rendered moot in view of new grounds of rejection on 04-15-05;
- Reply (with claim amendments to address 35 U.S.C. § 112, second paragraph issues) filed by Applicants on 07-15-05;
- Eighth Office Action issued, wherein previous arguments by Applicants rendered moot in view of new grounds of rejection on 09-28-05;
- Applicants file a first Reply on 01-30-06 and a Supplemental Reply with a Rule 132 Declaration on 02-16-06 addressing the issues in the Eighth Office Action, including the new grounds of rejection;
- Ninth Office Action, with completely new prior art rejections citing new references (thus previous arguments by Applicants rendered moot in view of new grounds of rejection) issued on 05-08-06.

It is further noted that, as explained above, that the Examiner has failed to narrow the issues, and instead forms 28 new prior art rejections (see paragraphs 2 and 3 of the current Office Action), which is unacceptable given that the presently pending claims have not significantly changed. In addition, the outstanding rejections are difficult to understand, and the newly cited references do not clarify any of the issues as presented by the Examiner. Further, Applicant is a single inventor and has incurred significant costs thus far due to the Examiner's handling of this application.

Accordingly, Applicant requests that a Notice of Allowance to issue for this case and/or that the present application be handled by a different Patent Examiner. Regarding transferring the present application, Applicant respectfully refers to paragraph 6, page 9, lines 4+ of the Office Action, wherein it is believe that the Examiner's comments are a basis for requesting a new Examiner. In particular, the Examiner appears to be admitting that he did not understand the claimed invention before. Though the Examiner alludes to how Applicant is overlooking two factors (page 9, lines 5-6 of the Office Action) and how claim amendments and Applicant's arguments have led to a better understanding of the claim scope by the Examiner (page 9, starting at line 11), please note that the claims have in fact not changed on many occasions in the past, and the Examiner should not be imposing delays via conducting new prior art searches because with each and every response/Office Action he better understands the invention. A new prior art search is also not justified when Applicants' claims have not significantly changed (as evident from reviewing the history of this case, including the reopening of prosecution upon twice appealing this application to the BPAI) and in consideration of how the Examiner should have previously understood the scope and breadth of the claims.

Status of the Claims

Claims 1-18 are pending in the present application. No claims are being amended, added or canceled. Thus, a listing of the claims is not needed.

As stated in paragraph 4 of the Office Action, claims 3 and 9 would be allowable if properly rewritten. However, based on the remarks below, reconsideration and allowance of all pending claims are respectfully requested.

Issues under 35 U.S.C. § 103(a)

As stated in paragraph 2 of the Office Action, claims 1, 2, 4-8, 10-12, 14-15 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tondre *et al.* (*J. Dispersion Science and Technology*, Vol. 7(5), pp. 581-597 (1986)) in view of Rouse *et al.* (*JAOCs*, Vol. 71, No. 1, pp. 37-42 (1995)) and Dombay *et al.* (*Proc. Conf. Colloid Chem. Mem.* (1988); newly cited), Hagan *et al.* (*Review of Scientific Instruments*, Vol. 58, pp. 468-474 (1987); newly cited), Nitta (*Fluid Phase Equilibria*, Vol. 53, pp. 105-112 (1989); newly cited), Streett (*Pure and Applied Chemistry*, Vol. 61, pp. 143-152 (1989); newly cited) and Yan (*Analytica Chimica Acta*, Vol. 234, pp. 493-497 (1990); newly cited). Thus, there appears to be (about) 7 new rejections cited in paragraph 2 of the current Office Action.

As stated in paragraph 3, claims 12-13 and 16-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tondre *et al.* in view of Rouse *et al.* and Dombay, Hagan *et al.* (newly cited), Nitta (newly cited), Streett (newly cited) or Yan (newly cited) as applied to claims 1, 2, 4-8, 10-12, 14-15 and 18 in paragraph 2 of the Office Action, and further in view of Khomutov *et al.* (*Carbohydrate Polymers*, Vol. 28, pp. 341-345 (1995); newly cited), Ohno *et al.*

(*Macromolecules*, Vol. 18, pp. 1287-1291 (1985); newly cited) or Subbaramaiah (*Current Science*, Vol. 8, p. 360 (1939); newly cited). Thus, there appears to be about 21 new rejections cited in paragraph 3 of the current Office Action.

Applicant respectfully traverses all rejections in several regards.

(A) Classic Piecemeal Prosecution

First, the total of 28 or more new rejections is unwarranted. Applicant respectfully submits the Examiner should have conducted a thorough search for all claimed features in any of the previous Office Actions, wherein the Examiner is not advancing prosecution and is conducting improper “piecemeal examination” (citing M.P.E.P. §§ 707.07(g) and 707.07(a)). In addition, the issues of unpatentability as presented in the Office Action have increased, instead of decreasing as usually the case when a typical patent application is being prosecuted.

(B) Rebutting All § 103(a) Rejections: New Declaration Enclosed

Applicant herein encloses another Declaration pursuant to 37 C.F.R. § 1.132 signed by inventor Rolf Skold. The enclosed Rule 132 Declaration is evidence of the patentability of the claimed invention in that the present invention has enjoyed commercial success. In this regard, as stated in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (BNA) (1966) and M.P.E.P. § 2141(I) (“Standard of Patentability to be Applied in Obviousness Rejections”), one of the four factual inquiries that must be made in each and every case includes “(D) Evaluating evidence of secondary considerations.”

First, Applicants note the Examiner's comments at paragraph 5, page 8 of the Office Action. Specifically, the Examiner questions the February 16, 2006 Declaration because: "there is not sufficient information given about how the instruments were placed with the respective companies and institution to determine if the placement of the instruments are actually commercial success or just research agreements with industry that are designed to help with the development of the instrument. The interactions between the applicant and the research community are very relevant to commercial success." Also stated in paragraph 5 of the Office Action, the Examiner appears to separate (i) commercial success and (ii) entering a research agreement with an industry that is designed to help with the development of the industry.

Second, in response to the Examiner's comments, Applicant respectfully submits that the Rule 132 Declaration attached to this reply is strong evidence of patentability and/or constitutes evidence of secondary considerations. Paragraph 4 shows large and well-known industry-type customers, such as Procter and Gamble. The attached invoices are objective evidence of the commercial success that the claimed invention is enjoying and is not considered as simply entering into a research agreement. Paragraph 5 of the attached Rule 132 Declaration details the reasons for the commercial success of the presently claimed invention. It is thus believed that this Declaration answers the Examiner's inquiries.

Further, Applicant points to the previous Rule 132 Declaration as cumulative support of the evidence of patentability for the instant application. Again, paragraph 4 of the Declaration identifies the customers involved in the commercial success and paragraph 5 details the reasons for the commercial success of the presently claimed invention. Further, the present invention enjoys commercial success due to its solutions for drawbacks in the art (e.g., quick and ready

access to physical and chemical data over an extensive range of temperatures and concentrations that give rapid indications regarding temperature-concentration ranges of particular interest; see paragraph 5 of the Rule 132 Declaration), its unexpected advantages (e.g., now the possibility of quantitatively identifying critical transition concentrations and temperatures and other characteristics on an extensive temperature-composition surface simultaneously in the same vessel) and its convenience (e.g., quick visualization of data in three dimensional graphs that adds to the ease and speed of data examination and information transfer).

Accordingly, Applicant respectfully submits that the present invention has achieved unexpected results as well as commercial success which rebut any asserted *prima facie* case of obviousness. *See In re Corkill*, 711 F.2d 1496, 226 USPQ (BNA) 1005 (Fed. Cir. 1985); *see also In re Papesch*, 315 F.2d 381, 137 USPQ (BNA) 43 (CCPA 1963); *In re Wiechert*, 370 F.2d 927, 152 USPQ (BNA) 247 (CCPA 1967). Further, Applicant notes M.P.E.P. § 2141, the section entitled "Objective Evidence Must be Considered". Accordingly, the objective evidence of the Rule 132 Declaration must be considered. That objective evidence also includes the attached invoices. Applicant also notes M.P.E.P. § 2144.09 (see section entitled "*Prima Facie* Case Rebuttable By Evidence of Superior or Unexpected Results"), which states that any rejection under 35 U.S.C. § 103(a) may be rebutted by a sufficient showing of unexpected results for the present invention.

Therefore, Applicant respectfully requests the Examiner to consider the contents of the Rule 132 Declaration along with the remarks herein and the previous arguments of patentability presented in the January 30, 2006 Amendment as rebutting the rejections under 35 U.S.C. § 103(a). It is believed that these rejections have been overcome.

(C) A Prima Facie Case of Obviousness Has Not Been Established for Any of the Cited Rejections

Applicant herein incorporates by reference the entirety of Applicant's previous "Amendment under 37 C.F.R. § 1.111" dated January 30, 2006 (especially pages 11-29 thereof). For instance, as Applicant explained in the previous response regarding the contents of Tondre, one of ordinary skill in the art would understand that Tondre fails to disclose or suggest any automatic determination or measurement or any recording of the independent variables. Further, Tondre *et al.* fails to disclose three-dimensional diagrams of the kind defined in the present invention. Additionally, the cited Tondre reference fails to disclose or teach the automatic collection of numerical data for use in the presentation of three-dimensional diagrams. The arguments in the January 30 Amendment apply to this rejection as well since Tondre *et al.*, Rouse *et al.*, Dombay *et al.* and Hagan are again cited and the newly cited references are merely secondary references that are cumulative in their disclosures. The following comments are added.

Applicant notes the several pages in the Office Action wherein the disclosures in the newly cited references are repeated. Specifically, the abstracts of Niita, Streett, Yan, Khomutov, Ohno and Subbaramaiah are reproduced without specifying the technical features which are believed pertinent in the judgement of patentability of the present invention as defined in the instant claims. Then, the conclusions of obviousness are found in the Office Action at page 6, first paragraph and page 7, lines 21-25 (for each rejection in paragraphs 2 and 3, respectively).

(i) Paragraph 2 of the Office Action

Nitta presents theoretical methods for the calculation of phase diagrams. More precisely, Nitta describes the theoretical calculation of phase equilibrium and critical points and the displaying of PTX phase diagrams. Nitta does not disclose any information regarding the method of collecting data and the equipment therefore. This is a major deficiency of Niita, wherein the present invention is not concerned with PTX diagrams and pressure as a independent variable.

Streett is also concerned with pressure-temperature-composition (PTX) phase diagrams and provides and discusses several important classes of such systems. Streett is not concerned with three-dimensional systems in accordance with the present invention and is improperly cited. Further there is no description in Streett of a method or a device for the collection of data.

Yan describes the theoretical background for multivariate functions and discloses that such multivariate functions can be processed in the QQN series software, which contains millions of models. Nor Yan does disclose any method or device for collecting data. Therefore, the disclosure of Yan is by no means affecting the patentability of the present invention and its combination with the other references is improper.

Thus, Nitta, Streett and Yan disclose PCT phase diagrams or multivariate functions from a theoretical point of view, but the fail to describe any methods or devices suitable for collecting any data to be included in such diagrams or functions. Therefore, it is evident (as one of skill in the art understands) that none of these references disclose any one of the essential features of the present invention as defined in the claims and in the Table of Applicant's previous Amendment of January 30. Again, the claimed feature of the measuring points in the computer are coordinated and visualized in a 3-dimensional diagram is not disclosed in the cited combinations

of references. Further, the assertion of automation not being novel is not applicable to the instant situation since the present invention uses a control program for concentration, a control program for temperature, and then the various data is collected, stored and converted into, e.g., the three-dimensional diagram. Thus, it not simply an issue of automation considering the many features involved in the claimed invention wherein the Examiner appears to focus on this issue throughout the Office Action.

Further, as previously asserted in the January 30 Amendment, there are many features of the present invention, wherein the skilled artisan would have to consider a multitude of factors to achieve what is claimed. Applicant respectfully submits that the Examiner's position of automation loses the proper focus on what the references really disclose or teach (e.g., e.g., Rouse because Rouse uses additions of oil and cosurfactant (to attain a solution that eventually becomes clear) that are essentially unpredictable in nature; the diagrams in Hagan lack both temperature and concentration as independent variables; etc.). The other references are again discussed in the previous response by Applicant.

Thus, a *prima facie* case of obviousness has not been established since there is no disclosure of all claimed features, the requisite motivation and/or the requisite reasonable expectation of success are lacking. *See In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). This is because, at the very least, the Rouse, Dombay, Hagan, Nitta, Streett and Yan references are inconsistent with the disclosure in the primary reference of Tondre, as well as each other, since none of the secondary references even disclose the instantly claimed control programs. Further, Tondre as the primary reference does not make such a suggestion to use the its "diluter programmer" to attain "the values obtained for the dependent properties are combined

with the values for the independent properties to measuring points and stored electronically in a computer” as instantly claimed. Applicant notes the other missing features in Tondre as the chart from the previous response. Further, one of ordinary skill in the art would not combine Tondre and Rouse, and further with Dombay and Hagan, Nitta, Streett or Yan, or any combination of thereof, because the present invention is significantly different in aim, method and equipment versus that in Tondre, Rouse, Dombay, etc. Just the differences in aim and methodology should warrant a finding that the references are improperly combined. Applicant also notes section (iii) below that addresses the Examiner’s comments throughout the Office Action.

(ii) Paragraph 3 of the Office Action

In paragraph 3 the Examiner further rejects the claim 12-13 and 16-17 as being unpatentable over Tondre in view of Rouse and Dobay, Hagan, Nitta, Streett or Yan and further in view of Khomutov, Ohno or Subbaramaiah, all newly cited and applied.

The newly cited reference of Khomutov discloses the manual preparation of gelatin-starch-water systems and the measurements of the turbidity at the required experimental temperature. Also viscosity measurements were made at a constant shear stress of 4 Pa and other parameters are measured for the preparation of two-dimensional diagrams. Khomutov does not disclose any method or device in accordance with the present invention.

The newly reference of Ohno discloses that an alternating copolymer of maleic acid and perdeuteriostyrene was subjected to the pH-induced conformational transition from the compact to extended coil form and that the transition was followed and supported by pH, optical,

viscometric and H NMR measurements. The data obtained are used for the construction of two-dimensional diagram. Ohno does not disclose any method or device related to the present invention.

Applicant has not received any reference in the name of "Subbaramaiah". Further, Applicant's representative has left a voicemail message to the Examiner indicated that Applicant has not received this reference, nor is this reference available on the USPTO PAIR system. It is noted that no contents of the present application/file wrapper are available on the PAIR system.

Regarding the reference by "Subba" (if this reference was suppose to be cited), this reference discloses that an ultra-microscopic examination revealed that the rod-like particles of colloidal stearic acid changed to spherical ones on heating and resumed their original shape when cooled. The reference does not disclose essential information related to a method or a device suitable for the automatic production of three-phase diagrams.

The Examiner has completely failed and has not even attempted to point out any specific technical feature in the newly cited references which may affect the patentability of the present invention as claimed. The citations of these new references do not make the combination with Tondre or any other secondary references any more proper as asserted above and in the January 30 response.

Applicants further add that the assertion of automation is not novel is not applicable to the instant situation since the present invention uses a control program for concentration, a control program for temperature, and then the various data is collected, stored and converted into, e.g., the three-dimensional diagram. Additionally, the cited combinations of references do not disclose the use of the independent variables of temperature and concentration in

combination with various dependent properties, and to further use such various data to attain, e.g., a three-dimensional diagram. Thus, it is not simply an issue of automation considering the many features involved in the claimed invention and the citation of *In re Venner* is inapplicable to the instant rejections.

Applicant also notes section (iii) below that addresses the Examiner's comments throughout the Office Action.

(iii) Paragraphs 2, 3, 5 and 6 of the Office Action & Further Distinctions for All Rejections

Applicant also notes that Examiner's quotes of *In re Keller*, *In re Merck*, and *Ex parte Obiaya* at page 10 of the Office Action. Applicant traverses in that there have not been any arguments of references "individually". If anything, the Office Action contains the individual discussion of each reference at length, and then the references are somehow combined. Thus, the disclosures of each reference is reproduced without specifying the technical features which are believed pertinent in the judgement of patentability of the present invention as defined in the instant claims.

Further, it appears that Applicant's previous arguments have not been understood. It is clear in the January 30, 2006 Amendment that Applicant was relying on the deficiencies of each reference because the references have been improperly combined. Further, the statements in the Office Action at page 10 are assuming that the references could be properly combined in the first place. Applicant is traversing that the references could be properly combined in the first place. Thus, Applicants respectfully request reconsideration of their previous remarks from January 30,

2006, as well as the remarks in the present reply, because it appears that Applicant's remarks have not been considered in the context of satisfying all requirements for a *prima facie* case of obviousness (*i.e.*, the requisite motivation) as they should be.

Regarding the citation of all of the secondary references with the primary reference of Tondre, these references are not in an analogous art with each other or with Tondre or with the present invention. The Office Action at page 11 refers to the *In re Oetiker* decision. Applicant believes *In re Oetiker* does apply to the instant situation as follows.

In re Oetiker involved the appellant arguing that the Examiner has improperly used nonanalogous art as a basis for an obviousness rejection. 24 USPQ2d 1443 (Fed. Cir. 1992). The Examiner in *Oetiker* did not reason with what the cited reference disclosed, but instead stated that a person faced with the particular problem at hand would look to the nonanalogous art (the cited reference) because the nonanalogous art would solve the same problem that the present invention solved.

In response to the Examiner's reasoning, the Federal Circuit stated that when relying on a cited reference(s), where the cited reference(s) is used to reject the applicant's invention, that reference(s) "must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned" (24 USPQ2d at 1445; citing *In re Deminski*, 230 USPQ 313, 315 (Fed. Cir. 1986).

However, the Federal Circuit continued on this line of reasoning with regard to nonanalogous art:

There must be some reason, suggestion, or motivation *found in the prior art* whereby a person of ordinary skill in the field of invention would make the combination. That knowledge can not come from the applicant's invention itself.

(Citing *Diversitech Corp. v. Century Steps, Inc.*, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988); *In re Geiger*, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987); *Interconnect Planning Corp. v. Feil*, 227 USPQ 543, 551 (Fed. Cir. 1985)). Then the court applied the facts to these principles.

The Federal Circuit decided in the applicant's behalf because the Examiner did not provide adequate reasons to rely on nonanalogous art, where the Examiner merely relied on a conclusion as to how a person faced with the particular problem at hand would look to the nonanalogous art because the nonanalogous art would solve the problem that the present invention solved.

That line of reasoning is held today, whether for analogous or nonanalogous art. U.S. case law squarely holds that a proper obviousness inquiry requires consideration of three factors: (1) the prior art reference (or references when combined) must teach or suggest all the claim limitations; (2) whether or not the prior art would have taught, motivated, or suggested to those of ordinary skill in the art that they should make the claimed invention (or practice the invention in case of a claimed method or process); and (3) whether the prior art establishes that in making the claimed invention (or practicing the invention in case of a claimed method or process), there would have been a reasonable expectation of success. *See, e.g., In re Vaeck*, 947 F.2d, 488, 493 (Fed. Cir. 1991); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1316-17 (Fed. Cir. 2000); *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); *see also In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) ("Obviousness cannot be established by combining the teachings of the

prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.”).

In other words, the prior art references must disclose or teach all features as claimed. In addition, the references themselves must state the motivation or suggestion to combine the references, and one having ordinary skill in the art must reasonably expect to be successful in achieving the present invention upon reading the references.

In applying case law such as *In re Vaeck*, *In re Kotzab*, and *In re Oetiker*, a *prima facie* case of obviousness has not been established. It clear, based on just the actual disclosure and teachings of each cited references, Tondre is not in analogous art with any of the cited secondary references. Thus, the *In re Oetiker* case does apply here. Further, the references are inconsistent with the technology at hand. For instance, it has not been properly established as to how one of ordinary skill in this art would reasonably expect to be successful or be motivated in referring to a reference directed to characterization of a metal surface (e.g., Hagan) in order to solve the problems as described by the Examiner (e.g., ability to map out an emulsion property)

Applicant also notes the Examiner’s conclusions of obviousness in the Office Action at page 6, first paragraph and page 7, lines 21-25 (for each rejection in paragraphs 2 and 3, respectively). The Examiner also keeps referring to the issue of automation as combining the cited references (see, e.g., page 11 of the Office Action). Effectively, these are too broad and dangerous simplifications. Most inventions are after their presentation easy to understand as well as the benefit of the invention. Therefore, it is normally easy to search in the literature for pieces of information and to put them together in a manner not suggested and to overlook under which circumstances the pieces of information were disclosed. It is not sufficient to be able to

show that certain pieces of information could have been combined by a person skilled in the art. Even circumstances that speak against a combination have to be considered. The question is if a person skilled in the art (a person with no capacity to make patentable inventions) and with no knowledge of the actual invention would have found it obvious, guided by the disclosure in the references (if the references are properly referred to in the first place), to combine them in such a manner that all the necessary characteristics of the invention were revealed. If the references do not disclose all the necessary characteristics then no proper combination can be made. This is the instant situation. Applicant also notes the lengthy discussions of the individual references, which includes many inconsistencies between the disclosures thereof. Further, one of ordinary skill in the art would not even consider many of the references in the same field of endeavor. Applicant is fully aware of the *In re Rouffet* decision (as well as the citation of *In re Oetiker* at page 11 of the Office Action), which holds that there are three possible sources of motivation to combine references: the nature of the problem to be solved, the teaching of the prior art, and the knowledge of persons of ordinary skill in the art. 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). None of these criteria, however, are satisfied given the (whole) disclosures of each reference. Based on the disclosure of each and every one of the cited references, the rejections in paragraphs 2-3 of the Office Action are based on searches in literature for pieces of information and then assembled together in a manner not suggested and even overlooks under which circumstances the pieces of information were disclosed. Accordingly, the instant rejections are improper. Applicant also notes the Rule 132 Declaration as attached herein. This Declaration is evidence that the present invention solves a long-felt need and is enjoying commercial success.

Applicant also notes the citation of *In re Keller* at page 11 of the Office Action. With regard to the cited secondary references, including the newly cited ones, the Examiner considers the technical problem as being automation. However, it is unreasonable to phrase the problem in these terms. First, all of the secondary references are deficient other than the automation aspect, as well as some being in a nonanalogous art with the primary reference and the present invention. Second, this approach does not take into account whatsoever of the specific technical problem which is clearly stated in the present specification. Third, considering the problem to be solved in the Examiner's terms implicitly includes a direction to the solution to the problem. This itself is unreasonable because the cited references ought to be considered without the benefit of hindsight reconstruction. In the present circumstances, Applicants submit that it is much more appropriate to consider the problem to be solved as that phrased in the specification instead of the Examiner's conclusions (e.g., need for automation without a detailed explanation).

With regard to the bottom of page 11 of the Office Action, Applicant invites the Examiner to review the contents of the "other reference" as alluded to in the Rouse reference. Further, there is no "trigger" to the *In re Venner* decision because this conclusion does not take into account the disclosure of the combination of references.

Regarding paragraph 6 of the Office Action and the measurements of Tondre and the Table in the January 30 Amendment (page 13), Applicant maintains their position and the accuracy of the Table (especially features 3-6). This is because, e.g., in Tondre the temperature and concentration are changed by control programs but the temperature and the concentration are not automatically calculated from the programs or by measurements in electronic (digital) form. Further, the device described in Tondre does not store the values of the turbidity and temperature

in the computer. The data obtained by Tondre are recorded by a double trace (turbidity and temperature) analogue recorder on paper as a function of time. Turbidity is only measured in arbitrary units, since one is only concerned with clear and not clear solutions (a subjective judgement). Regarding the temperature measurements, the zero offset and the slope correction device are adjusted (manually) so as to have a convenient temperature scale for direct reading in °C (see page 585, first full paragraph; page 584, figure 2 and page 586, Figure 3). From Figure 3, page 586, it is also evident that the double trace recorder does not record the concentration on paper, but the concentrations are manually calculated from the settings of the diluter programmer (see especially the comments in the caption of Figure 3). From the above, it is obvious that the measurements of the variables and their coordination and presentation in Tondre exhibits fundamental differences in comparison with the present invention as defined in at least instantly pending claim 1.

Applicant also maintains that the process disclosed in Tondre cannot be automated by the teachings from Rouse, since the methods are very different. These facts have been thoroughly discussed in the January 30 response. For example, Tondre has temperature as a variable, whereas Rouse has a fixed temperature and only measures changes of the phases. Further, the Rouse phase diagrams are composed of three concentrations. These diagrams are of a completely different type than the three-dimensional diagrams of the present invention as well as the diagrams in Tondre. The citation of Nitta, Streett, etc., does not make the instant combinations of references any more proper. From the above it is evident that Tondre and Rouse would not be combined by a person skilled in the art and, even if they are combined, the combination could not result in a method or device according to the invention, for example due to the reason, that

neither Tondre or Rouse records and uses the dependent parameter in digital form, combine the dependent parameter with temperature and concentration digital values to digital measuring points, or stores such digital measuring points (please even compare with Claim 1, step 5, of the present invention). Thus, at the very least, the Office Action oversimplifies the problems associated in the art as well as what the present invention has accomplished. In this regard, please refer to the Rule 132 Declaration herein enclosed as the present invention has enjoyed commercial success.

Applicants note that the initial burden of establishing a *prima facie* case of obviousness lies with the examiner. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). That burden, as thoroughly explained above and in Applicant's previous replies, has not been met nor has the burden of proving patentability shifted to Applicant.

(iv) Summary

Applicant respectfully submits that the Rule 132 Declaration establishes the patentability of the instant claims. In particular, the present invention enjoys commercial success due to its solutions for drawbacks in the art (e.g., quick and ready access to physical and chemical data over an extensive range of temperatures and concentrations that give rapid indications regarding temperature-concentration ranges of particular interest), its unexpected advantages (e.g., now the possibility of quantitatively identifying critical transition concentrations and temperatures and other characteristics on an extensive temperature-composition surface simultaneously in the same vessel) and its convenience (e.g., quick visualization of data in three dimensional graphs

that adds to the ease and speed of data examination and information transfer). The present invention obviously solves a long-felt need (see the attached Declaration with the invoices). Further, a *prima facie* case of obviousness has not been established for any and all of the cited combinations of references as explained above in the previous replies. Thus, reconsideration, withdrawal of all rejections, and allowance of the pending claims are respectfully requested.

Other Matters

Applicant acknowledges that the Examiner finds the recently submitted drawings to be acceptable (see Box 10 of the PTOL-326 form of the Office Action).

Also, Applicant notes the error in Box 1 of the PTOL-326 form of the Office Action. The Examiner fails to indicate that the Office Action is in response to the replies filed on January 30, 2006, and February 16, 2006.

Applicant point out that there is now a new Attorney Docket Number for this application. Proper entry of this information is respectfully requested from the Examiner.

Conclusion

A full and complete response has been made to all issues as cited in the Office Action. Applicants have taken substantial steps in efforts to advance prosecution of the present application.

Application No. 09/381,828

Attorney Docket No.: 5333-0101PUS1

Art Unit 1743

Reply to Office Action of September 28, 2005

Again, Applicant also requests that the Group Director of Art Unit 1700 (Jacqueline Stone) review the contents of the present application, including the current lengthy Office Action and the reply herein.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez (Reg. No. 48,501) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: AUG 4 2006

Respectfully submitted,

By 

D. Richard Anderson

Registration No.: 40,439

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road, Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

Attachment: Declaration pursuant to 37 C.F.R. § 1.132